

# CASTLEMAINE NATURALIST

AUGUST '83

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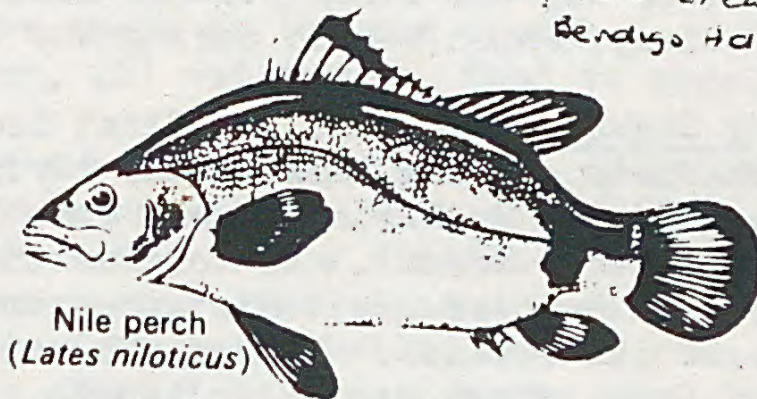


## A DELICACY OR A DANGER?

A marine prison, costing tens of thousands of dollars has now been built at Atherton Tablelands Walkamin Research Station by Queensland Fisheries Service. It is to contain what could be a potentially dangerous import to Australia.

by Ann Joyce

from an article  
by Peter Stewart  
Bendigo Ad.



Nile perch  
(*Lates niloticus*)

The African Nile Perch, closely related to and almost with the Barramundi with the same sporting and table qualities, it is to be introduced next December. To many Australians, Barramundi is the ultimate catch, but, unlike Barramundi, the African Nile Perch is an exotic predator with potential for environmental disaster equalling the European carp and the Cane Toad.

Pat McLaren, managing director of Murray Cod Hatcheries, Australia Ltd., Wagga N.S.W. believes natives can offer as much or more than African Nile Perch without the unnecessary risks of developing a newly introduced species.

With due respects to intensive evaluation studies, the full potential of Nile Perch cannot be fully determined prior to final release from experimental hatcheries. Who can unconditionally guarantee this fish will not, in years to come, develop changed temperature tolerances like European carp and Redfin for example, and invade our entire river system.



# BIRDS OF THE ARID REGIONS.

## SCIENTIFIC DAY IN ADELAIDE.

### REPORT FROM AUDREY BRUTON.

On Friday 27th May, Stan and I attended a Scientific Day, in Adelaide, organised by the R.A.O.U. in conjunction with the South Australian Ornithologists Association.

Owing to a slight discrepancy in the bus time-table, we were rather late in arriving at the Education Centre of the Adelaide Zoo, and found, on our arrival, that the first lecture was over, and the second half way through.

The topic of the day was 'Birds of the Arid Zone', and the programme consisted of 8 forty-minute lectures, which proved to be full of fascinating detail and illustrated by charts and graphs from an over-head projector, plus colour slides.

Morning and afternoon teas and lunch were provided. These were taken in a paved area out-of-doors, under a warm and sunny skies, and immediately behind the Zoo's large walk-through aviary. While we ate and drank a whip-bird enthusiastically cracked his whip over us, and other strange bird-calls invited us to visit the aviary, which we did during the lunch break.

Dr Steven Davies was the first lecturer we heard, having missed Dr Shodde's opening talk on the 'Origin and Evolution of Arid Zone Birds'. Dr Davies' theme was 'Behavioural Adaptations of Birds to Arid Zones'. He told us that bird movements in arid zones can be over great distances and largely dictated by rainfall or its absence. He ran a banding project along a vermin-proof fence about 800 km in length. In periods of emu migration the build-up of these birds along the fence is incredible. Dr Davies counted 10,600 birds in a single day. He said that about 70,000 emus died on that fence in one year, as they tried to reach water. They travel to meet the winter rains at the southern end of their path, and to meet the southern cyclones at the northern end, perhaps guided in these migrations by the build-up of cloud banks. He estimates a population of about 200,000 emus in the area he worked.

The movement of weaver finches in Africa, oriented by rainfall pattern, is interesting. These birds feed on dry seeds; when it rains the seeds sprout, and the weaver finches move away to find dry seeds in another area. After rain the birds put on sufficient body fat to get them back through the rain zone to an area of dried seeds again. In Australia budgerigahs, in a similar food slot, don't have to lay down body fat. They are not truly migratory, but find their living around a defined area that doesn't require an arduous journey, or stored body fat.



David Booth's subject was 'Some Aspects of the Biology of the Mallee Fowl'. His research, carried out in the field 10 km west of Renmark, was to try the effect of adding water to mounds in drought periods, when normally breeding fails. He wished to test Frith's idea that failure to produce chicks occurs because vegetative matter is so dry that no humidity develops to assist hatching.

For his experiment, David chose four mounds which were currently being worked, in Aug. 1981. Two of these he left untouched as controls, and two he watered. In October he added 15 litres of water to each mound, and two weeks later 400 litres, by means of a tank-truck and hose. Two weeks after that the control mounds showed that activity was tapering off, but the watered mounds were still being worked. By mid-November the control mounds were completely abandoned, and the watered ones were still being tended. In early December an egg chamber was formed but very soon after that the mound was deserted by the birds. So in spite of suitable incubation temperature and humidity, breeding did not take place. Other possibilities now remain to be checked out: does breeding fail because there is (a) not enough food for egg formation in the females, or, (b) not enough food to supply chicks when hatched?

Nick Reid's special interest was 'Food Supply of Spiny-cheeked Honeyeater and Mistletoe Bird near Whyalla'. With particular emphasis on the flowering and fruiting of the mistletoe quandong (grey mistletoe), *Amyema quondong*. His area of study was Middleback Station, between Iron Knob and Whyalla, annual rainfall 190mm. Although there are other food trees in the area, *Amyema* is by far the most important to the survival of these two bird species. It is a parasite, propagated by birds dropping the sticky seeds onto the host tree. *Amyema* is able to creep along the branches, sending up strong, vertical limbs which can eventually cover the whole host tree. This mistletoe has a long flowering period and fruiting season, so that at any one time about one-fifth of the total trees in a given area are carrying ripe fruit - a continual banquet for the birds who live on it.

The Spiny-cheeked honeyeater, although it makes *Amyema* its principal food source, is not entirely dependent on it, and will eat flowers and fruits of other plants as well as insects and other miscellaneous bits and pieces. The Mistletoe birds' taste is less catholic; they depend heavily on *Amyema*. The Spiny-cheeks are present in the study area throughout the year, but in fluctuating numbers, lowest in summer, highest in winter; they remain faithful throughout the year to their own sites, and boundaries are sharply adhered to. Mistletoe birds, too, are present throughout the year, as one would expect, with their food supply so neatly organised.

To be continued.



Continued from July issue

## FAMILIES

There are eleven families of snakes, six of which are represented in Australia. The most primitive of these is the family 'TYPHLOPIDAE', composed of burrowing snakes, commonly known as blind snakes. There are <sup>Blind Snake</sup> about 22 species in Australia ranging in length from a few millimetres in diameter to nearly 70cm in length. All live most of their lives underground, usually a short distance below the surface. Blind snakes appear to feed mainly on insects such as termites and so are sometimes found in loose soil under rotting logs. They come to the surface at night and often are seen in the headlights of a car as they cross a track. Because of their subterranean existence, blind snakes tend to live in sandy areas, such as the sand dunes of Central Australia. They have a number of adaptations to their mode of life, including an underslung jaw and mouth to stop soil entering when they burrow. Their eyes are very reduced in size and efficiency, hence their name. They have stubby ended tails with a scaly spine at the tip and a sharp point. This is used to give them purchase when pushing into the soil. If picked up and placed on the hand a blind snake will try to burrow to escape, pushing its tail spine into the hand to gain purchase. This has caused people to panic in the past thinking that the snake has stung them, though in reality the spine cannot penetrate the skin and is not venomous. Blind snakes are entirely harmless.



Another family of primitive, non-venomous snakes is the python family 'BOIDAE'. There are about eleven species of python in Australia, ranging in size from the Children's Python, just over one metre long, to the Scrub Python of far North Queensland which is over five metres in length and over 20 kg in weight. All pythons kill their prey by asphyxiation. As the prey breathes out the python retightens its coils, thus preventing the victim from breathing properly, and gradually killing the prey. Because of their size, pythons sometimes kill large animals such as Wallabies. To enable them to swallow prey much bigger than their own mouths, pythons, in



common with other snakes, have lower jaws which are in two halves, joined at the chin by elastic tissue, which can stretch dramatically. (The jaws also dislocate). Pythons are nocturnal and mostly feed on mammals and birds. To help detect their prey at night they have special heat sensitive organs along the lower jaws which enable them to distinguish their prey from the colder environment around. So effective are these organs that the snake can often successfully strike and capture prey even when blindfolded. In Australia pythons are the only snakes with this heat-sensing ability, although on other continents some vipers and rattlesnakes have similar organs.

The next family of Australian snakes is 'ACROCHORIDIDAE' or File snakes, of which there are only two species. File snakes are purely aquatic, living almost their entire existence in water, where they hunt fish. In Australia they are found only in the far northern regions, in creeks, billabongs and swamps, where they are quite common. They have very rough scales, hence their name. They are completely non-venomous and harmless. So well adapted are they for an aquatic existence that they find movement on land virtually impossible.

A large world wide family of snakes is the 'COLUBRIDAE' with many species of which only 11 are found in Australia. They vary considerably in form with the best known being the Tree snakes. There are two species of Green tree-snakes, both non-venomous, which eat mainly frogs and lizards, and are found across northern Australia and down the Eastern seaboard. Tree snakes are long, slender reptiles, well suited to trees, and come in a variety of colours as well as green. The Brown tree-snake is more slender than the Green tree-snake with a comparatively larger head. It has small fangs at the back of the mouth but is not considered dangerous to man. Most of the other Australian Colobrids live in or near water in northern Australia and usually feed on fish and crabs. Some have back fangs like the Brown tree-snake but again are not considered dangerous to man. They include such species as the Bockadam, the Mangrove snake and Macleay's water snake.

To be Continued

## IN FLOWER.

Scented Sundews

Black Wattle

Early Nancies

White Marianth (First seen June 6, but now more flowering)

Also found this month by the CHS Bushwalkers was a strange gilled fungus with a rather "hairy" brown cap and purplish gills. It was growing on a rotting coffee bush.



# From the ROADSIDES COMMITTEE

## NOTICE OF A SEMINAR IN BENDIGO

### ROADSIDES - WORTH MORE THAN A PASSING THOUGHT?

A Seminar on the values and management of road reserves and their vegetation.

Bendigo College of Advanced Education,

Edwards Street Campus,

Edwards Street, Bendigo.

Friday 2nd September, 1983.

### PROGRAMME

Chairmen - Graeme David, Regional Environment Officer,  
Ministry for Conservation, Bendigo.

Kevin Ritchie, Extension Officer, Forests Commission of Victoria.

- 9.00 Registration and morning tea.
- 9.15 Welcome: Dr. Ian MacBean, Manager, Community Services Unit,  
Bendigo, C.A.E.
- 9.20 Outline of day's programme : Graeme David.
- 9.30 The Roadsides Conservation Committee: Ian Cowdell, Chairman,  
Roadsides Conservation Committee.
- 9.40 Keynote Address "Roadsides - Worth more than a passing thought?"  
Professor John Turner, Emeritus Professor of Botany, University  
of Melbourne.
- 10.10 Bus tour to inspect roadsides in the Bendigo area.
- 12.30 Lunch
- 1.30 Power distribution versus roadside vegetation; resolving the conflicts:  
Bill Dennis, Distribution Engineer, S.E.C. Bendigo.
- 1.55 Roadsides - their part in fire prevention: Assistant Chief Officer,  
Jim Barber, Officer-in-Charge, C.F.A.'s Research Unit.
- 2.20 Local Government and Roadside Management: Geoff Saunders,  
Shire Engineer, Shire of Huntly.
- 2.45 Roadsides - a landholder's perspective: Bill Twigg, Bears Lagoon.
- 3.15 Afternoon tea.
- 3.40 Panel discussion and questions.
- 4.10 Chairmen's concluding remarks: Graeme David, Kevin Ritchie.

FURTHER DETAILS AT THE  
AUG. MEETING



## W.V.F.N.C.A. Campout at Bacchus Marsh, 14th to 16th Oct.'83

Details of the program are not yet available, but if you are thinking of going and staying at the Lady Northcote Camp you will need to let the Club secretary know by the September meeting so that arrangements can be made with Ballarat.

Details which they need to know are-

Number attending (adults and children), time of arrival, meals required (available are- dinner, fri and Sat., breakfast, Sat and Sun, lunch, Sat., and packed lunch, Sun.)

Single bed accomodation is in cottages - 13 persons per cottage ( 2x2 bed rooms, 1x9 bed dormitory)

You would need to take sheets pillow case towel etc., blankets and pillows are provided.

|                 |                  |              |        |           |
|-----------------|------------------|--------------|--------|-----------|
| Costs - Adults, | Each meal \$2.75 | Accomodation | \$3.50 | per night |
| Children "      | "                | "            | \$3.00 | "         |

Each Cottage has facilities for filling thermos flasks. The camp has been hired on the understanding that they have a catered service.

Caravans and tents are not permitted in the Camp.

The nearest Caravan Park is the Cherry Inn Caravan Park on the old Ballarat Road, west of Bacchus Marsh, Phone (053) 67 2775.

You will need to make you bookings with the Caravan Park early.

## Patterson's Curse or Salvation Jane?

By Ann Joyce

This plant, probably introduced from Europe in the 1850s, has plagued farmers in fertile, high rainfall areas of Eastern Australia, but graziers in drier areas claim it is a valuable fodder. This has been proven during drought periods. Beekeepers also use it to build up their hives in the spring to produce a popular honey.

C.S.I.R.O. planned to import a leaf mining moth, a stem boring beetle and two types of leaf eating flea beetles for biological control of this plant. This program has been halted Australia wide by a recent South Australian Supreme Court injunction in favour of the graziers and beekeepers.

*Condensed from an article by  
Carol Sides*



## CLUB PROGRAMME

### MEETINGS

#### AUGUST

Friday 12 Dr R.G.Vines,  
Fire Research.  
At the High School, Lawson Pde.

Thurs.25. Business meeting,  
Ed. Centre, Mostyn St.

#### SEPTEMBER

Friday 9 To be arranged

Thurs 22. Business meeting,  
Ed. Centre.

#### OCTOBER

Friday8 Maggie Oliver

Thurs 27, Business Meeting,  
Ed. Centre.

#### NOVEMBER

Friday 11 Mr Geoff Gerdson.

Thurs24 Business meeting,  
Ed. Centre

#### DECEMBER

Friday 9 Members and Visitors  
Night

No business meeting in Dec.

#### COMMITTEE

|           |                       |
|-----------|-----------------------|
| President | Mr G. Broadway 722513 |
| Hon Sec   | Mrs S. Bruton 723050  |
| Treasurer | Mr F. Meyer 721959    |
| Editor    | Mrs R. Mills          |

Articles for the Magazine may be  
left at Tonks Bros, 224 Barker St.

### OUTINGS

#### AUGUST

Sat. 13. Guildford birds and  
mineral springs. Leader Berri  
Perry. Leave S.E.C. Mostyn St  
1.30 pm.

#### SEPTEMBER

Sat 10 . L.C.C. block 74n on  
the Maldon railway line, between  
Castlemaine and Muckleford.

Monday 19 All day walk, comm-  
encing at the wildflower  
reserve on the Elphinstone  
Ridge road and finishing  
near the Monk.

#### OCTOBER

Sat 9. Mt Lofty, near Redesdale.  
Leader E Perkins

Sat and Sun. 15 & 16.

W.V.F.N.C.A. Campout at Bacchus  
Marsh, hosted by Ballarat Club.  
Venue - Lady Northcote Camp,  
on Glenmore Road, approx 16km  
west of Bacchus Marsh. As this  
is a fully catered camp, the  
Ballarat club needs to know the  
number attending. Details p7.

#### NOVEMBER

Mt Franklin North (This is the  
outing which was washed out  
earlier in the year.)

EARLY NANCIES, once often called the harbingers of Spring, were  
first sighted by the C.H.S. bushwalkers on July 18. Two pink  
ones, a male and a female were spotted a fortnight later, quite  
close to each other. Perhaps there will be more next year?  
The group who went that day are quite hopeful.